

REMARKS

The following remarks are submitted in response to the outstanding Office Action, wherein the Examiner rejected Claims 1-13, all the claims under consideration.

Prior to discussing the prior art rejections, Applicants take this opportunity to set forth the following brief remarks about the claimed invention. Applicants' invention utilizes a stacked gate structure to produce stress in the channel of the device that is present in a silicon-containing bulk substrate or a silicon-on-insulator (SOI) layer of an SOI substrate. In an effort to more clearly reflect this aspect of the invention, Applicants have amended Claim 1 to recite that a stacked gate structure of SiGe and/or Si:C produces stresses in a channel region of a transistor device that is beneath the stacked gate structure and is within the substrate. Support for the amendment to Claim 1 is found throughout Applicants' disclosure. *See*, for example, paragraph 0038.

In the present Office Action, Claims 1-13 are rejected under 35 U.S.C. §102(e) as allegedly anticipated by U.S. Patent Application Publication No. 2002/0125471 to Fitzgerald et al. ("Fitzgerald et al."). Applicants respectfully disagree and submit the following.

It is axiomatic that anticipation under §102 requires the prior art reference to disclose every element to which it is applied. *In re King*, 801 F.2d 1324, 1326, 231 USPQ 36, 138 (Fed Cir, 1986). Thus, there must be no differences between the subject matter of the claim and the disclosure of the prior art reference. Stated another way, the reference must contain within its four corners adequate direction to practice the invention as claimed. The corollary of the rule is equally applicable: absence from the applied reference of any claimed element negates anticipation. *Kloster Speedsteel AB v. Crucible Inc.*, 793 F.2d 1565, 1571, 230 USPQ 81, 84 (Fed. Cir. 1986).

Applicants submit that Fitzgerald et al. fails to anticipate Applicants' claimed structure, because the applied prior art reference fails to disclose a stacked gate structure of SiGe and/or Si:C that produces stresses in a channel region of the transistor device that is beneath the stacked gate structure and is within the substrate, wherein the substrate is either bulk silicon (Si) or silicon on insulator (SOI), as recited in amended Claim 1. As discussed above, Applicants' claimed structure produces stress within, i.e., below the upper surface of, a bulk silicon substrate or silicon-on-insulator substrate having a stacked gate structure of SiGe and/or Si:C disposed on top thereof.

Contrary to Applicants' claimed structure, in which a stressed channel is produced within the substrate, Fitzgerald et al. forms a stressed channel by growing stained silicon layer atop a SiGe/Si substrate. More specifically, referring to paragraph 0031 of the Fitzgerald reference:

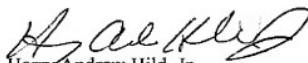
“In accordance with the invention, the performance of a silicon CMOS inverter is enhanced by increasing the electron and hole mobility. This enhancement is achieved through deploying surface channel, strained-silicon, which is epitaxially grown on an engineered SiGe/Si substrate.”

Therefore, because Fitzgerald et al. discloses forming a strained channel on the surface of the substrate using an epitaxial growth processes, Fitzgerald et al. fails to disclose a structure that utilizes a gate structure to produce stresses in a channel region of the transistor device that is beneath the stacked gate structure and is within the substrate, as recited in amended Claim 1.

The forgoing remarks clearly demonstrate that the applied reference does not teach each and every aspect of the claimed invention as required by *King* and *Kloster Speedsteel; et. al.*, therefore the claims of the present application are not anticipated by the disclosure of Fitzgerald et al. Applicants respectfully submit that the instant §102 rejections has been obviated and withdrawal thereof is respectfully requested.

In view of the foregoing, this application is now believed to be in condition for allowance, and a Notice of Allowance is respectfully requested. If the Examiner believes a telephone conference might expedite prosecution of this case, it is respectfully requested that he call Applicant's attorney at (516) 742-4343.

Respectfully submitted,



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